RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/507,968B

DATE: 04/25/2001
TIME: 13:20:10

Input Set : A:\09507968 SEQ LIST.txt
Output Set: N:\CRF3\04122001\I507968B.raw


```
  3 <110> APPLICANT: Yu et al.
  5 <120> TITLE OF INVENTION: Neutrokine-alpha and Neutrokine-alpha Splice Variants
  7 <130> FILE REFERENCE: PF343P3
  9 <140> CURRENT APPLICATION NUMBER: 09/507,968B
 10 <141> CURRENT FILING DATE: 2000-02-22
 12 <150> PRIOR APPLICATION NUMBER: 60/122,388
 13 <151> PRIOR FILING DATE: 1999-03-02
 15 <150> PRIOR APPLICATION NUMBER: 60/124,097
 16 <151> PRIOR FILING DATE: 1999-03-12
 18 <150> PRIOR APPLICATION NUMBER: 60/126,599
 19 <151> PRIOR FILING DATE: 1999-03-26
 21 <150> PRIOR APPLICATION NUMBER: 60/127,598
 22 <151> PRIOR FILING DATE: 1999-04-02
 24 <150> PRIOR APPLICATION NUMBER: 60/130,412
 25 <151> PRIOR FILING DATE: 1999-04-16
 27 <150> PRIOR APPLICATION NUMBER: 60/130,696
 28 <151> PRIOR FILING DATE: 1999-04-23
 30 <150> PRIOR APPLICATION NUMBER: 60/131,278
 31 <151> PRIOR FILING DATE: 1999-04-27
 33 <150> PRIOR APPLICATION NUMBER: 09/255,794
 34 <151> PRIOR FILING DATE: 1999-02-23
 36 <150> PRIOR APPLICATION NUMBER: 60/131,673
 37 <151> PRIOR FILING DATE: 1999-04-29
 39 <150> PRIOR APPLICATION NUMBER: 60/136,784
 40 <151> PRIOR FILING DATE: 1999-05-28
 42 <150> PRIOR APPLICATION NUMBER: 60/142,659
 43 <151> PRIOR FILING DATE: 1999-07-06
 45 <150> PRIOR APPLICATION NUMBER: 60/145,824
 46 <151> PRIOR FILING DATE: 1999-07-27
 48 <150> PRIOR APPLICATION NUMBER: 60/167,239
 49 <151> PRIOR FILING DATE: 1999-11-24
 51 <150> PRIOR APPLICATION NUMBER: 60/168,624
 52 <151> PRIOR FILING DATE: 1999-12-03
 54 <150> PRIOR APPLICATION NUMBER: 60/171,108
 55 <151> PRIOR FILING DATE: 1999-12-16
 57 <150> PRIOR APPLICATION NUMBER: 60/171,626
 58 <151> PRIOR FILING DATE: 1999-12-23
 60 <150> PRIOR APPLICATION NUMBER: 60/176,015
 61 <151> PRIOR FILING DATE: 2000-01-14
 64 <160> NUMBER OF SEQ ID NOS: 38
 66 <170> SOFTWARE: PatentIn Ver. 2.1
 68 <210> SEQ ID NO: 1
 69 <211> LENGTH: 1100
 70 <212> TYPE: DNA
 71 <213> ORGANISM: Homo sapiens
 73 <220> FEATURE:
 74 <221> NAME/KEY: CDS
```

RAW SEQUENCE LISTING DATE: 04/13/2001
PATENT APPLICATION: US/09/507,968B TIME: 13:20:10

Input Set : A:\09507968 SEQ LIST.txt
Output Set: N:\CRF3\04122001\I507968B.raw

```
75 <222> LOCATION: (147)..(1001)
77 <400> SEQUENCE: 1
78 aaattcagga taactctcct gaggggtgag ccaagcgctg ccatgtagtg cagcaggac 60
80 atcaacaaac acagataaca ggaaatgatc cattcgctgt ggtcacttat tctaaaggcc 120
82 ccaaccttca aagttcaagt agtgat atg gat gac tcc aca gaa agg gag cag  173
83                              Met Asp Asp Ser Thr Glu Arg Glu Gln
84                                1               5
86 tca cgc ctt act tct tgc ctt aag aaa aga gaa gaa atg aaa ctg aag   221
87 Ser Arg Leu Thr Ser Cys Leu Lys Lys Arg Glu Glu Met Lys Leu Lys
88  10                  15                  20                  25
90 gag tgt gtt tcc atc ctc cca cgg aag gaa agc ccc tct gtc cga tcc   269
91 Glu Cys Val Ser Ile Leu Pro Arg Lys Glu Ser Pro Ser Val Arg Ser
92                  30                  35                  40
94 tcc aaa gac gga aag ctg ctg gct gca acc ttg ctg ctg gca ctg ctg   317
95 Ser Lys Asp Gly Lys Leu Leu Ala Ala Thr Leu Leu Leu Ala Leu Leu
96                  45                  50                  55
98 tct tgc tgc ctc acg gtg gtg tct ttc tac cag gtg gcc gcc ctg caa   365
99 Ser Cys Cys Leu Thr Val Val Ser Phe Tyr Gln Val Ala Ala Leu Gln
100          60                  65                  70
102 ggg gac ctg gcc agc ctc cgg gca gag ctg cag ggc cac cac gcg gag   413
103 Gly Asp Leu Ala Ser Leu Arg Ala Glu Leu Gln Gly His His Ala Glu
104      75                  80                  85
106 aag ctg cca gca gga gca gga gcc ccc aag gcc ggc ctg gag gaa gct   461
107 Lys Leu Pro Ala Gly Ala Gly Ala Pro Lys Ala Gly Leu Glu Glu Ala
108  90                  95                  100                 105
110 cca gct gtc acc gcg gga ctg aaa atc ttt gaa cca cca gct cca gga   509
111 Pro Ala Val Thr Ala Gly Leu Lys Ile Phe Glu Pro Pro Ala Pro Gly
112                 110                 115                 120
114 gaa ggc aac tcc agt cag aac agc aga aat aag cgt gcc gtt cag ggt   557
115 Glu Gly Asn Ser Ser Gln Asn Ser Arg Asn Lys Arg Ala Val Gln Gly
116             125                 130                 135
118 cca gaa gaa aca gtc act caa gac tgc ttg caa ctg att gca gac agt   605
119 Pro Glu Glu Thr Val Thr Gln Asp Cys Leu Gln Leu Ile Ala Asp Ser
120         140                 145                 150
122 gaa aca cca act ata caa aaa gga tct tac aca ttt gtt cca tgg ctt   653
123 Glu Thr Pro Thr Ile Gln Lys Gly Ser Tyr Thr Phe Val Pro Trp Leu
124     155                 160                 165
126 ctc agc ttt aaa agg gga agt gcc cta gaa gaa aaa gag aat aaa ata   701
127 Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu Glu Lys Glu Asn Lys Ile
128 170                 175                 180                 185
130 ttg gtc aaa gaa act ggt tac ttt ttt ata tat ggt cag gtt tta tat   749
131 Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile Tyr Gly Gln Val Leu Tyr
132                 190                 195                 200
134 act gat aag acc tac gcc atg gga cat cta att cag agg aag aag gtc   797
135 Thr Asp Lys Thr Tyr Ala Met Gly His Leu Ile Gln Arg Lys Lys Val
136             205                 210                 215
138 cat gtc ttt ggg gat gaa ttg agt ctg gtg act ttg ttt cga tgt att   845
139 His Val Phe Gly Asp Glu Leu Ser Leu Val Thr Leu Phe Arg Cys Ile
140         220                 225                 230
```

RAW SEQUENCE LISTING DATE: 04/13/2001
PATENT APPLICATION: US/09/507,968B TIME: 13:20:10

Input Set : A:\09507968 SEQ LIST.txt
Output Set: N:\CRF3\04122001\I507968B.raw

```
142 caa aat atg cct gaa aca cta ccc aat aat tcc tgc tat tca gct ggc   893
143 Gln Asn Met Pro Glu Thr Leu Pro Asn Asn Ser Cys Tyr Ser Ala Gly
144     235                 240                 245
146 att gca aaa ctg gaa gaa gga gat gaa ctc caa ctt gca ata cca aga   941
147 Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu Gln Leu Ala Ile Pro Arg
148 250                 255                 260                 265
150 gaa aat gca caa ata tca ctg gat gga gat gtc aca ttt ttt ggt gca   989
151 Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp Val Thr Phe Phe Gly Ala
152                 270                 275                 280
154 ttg aaa ctg ctg tgacctactt acaccatgtc tgtagctatt ttcctccctt      1041
155 Leu Lys Leu Leu
156             285
158 tctctgtacc tctaagaaga aagaatctaa ctgaaaatac caaaaaaaaa aaaaaaaaa  1100
161 <210> SEQ ID NO: 2
162 <211> LENGTH: 285
163 <212> TYPE: PRT
164 <213> ORGANISM  Homo sapiens
166 <400> SEQUENCE: 2
167 Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu
168   1               5                  10                  15
170 Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
171             20                  25                  30
173 Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
174         35                  40                  45
176 Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
177     50                  55                  60
179 Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
180 65                  70                  75                  80
182 Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
183                 85                  90                  95
185 Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
186             100                 105                 110
188 Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
189         115                 120                 125
191 Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
192     130                 135                 140
194 Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
195 145                 150                 155                 160
197 Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
198                 165                 170                 175
200 Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
201             180                 185                 190
203 Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
204         195                 200                 205
206 Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
207     210                 215                 220
209 Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
210 225                 230                 235                 240
212 Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
```

RAW SEQUENCE LISTING DATE: 04/13/2001
PATENT APPLICATION: US/09/507,968B TIME: 13:20:11

Input Set : A:\09507968 SEQ LIST.txt
Output Set: N:\CRF3\04122001\I507968B.raw

```
                    245                 250                 255
Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu
                260                 265                 270
Asp Gly Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
            275                 280                 285
<210> SEQ ID NO: 3
<211> LENGTH: 233
<212> TYPE: PRT
<213> ORGANISM  Homo sapiens
<400> SEQUENCE  3
Met Ser Thr Glu Ser Met Ile Arg Asp Val Glu Leu Ala Glu Glu Ala
  1               5                  10                  15
Leu Pro Lys Lys Thr Gly Gly Pro Gln Gly Ser Arg Arg Cys Leu Phe
             20                  25                  30
Leu Ser Leu Phe Ser Phe Leu Ile Val Ala Gly Ala Thr Thr Leu Phe
         35                  40                  45
Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Phe Pro
     50                  55                  60
Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser
 65                  70                  75                  80
Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro
                 85                  90                  95
Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu
            100                 105                 110
Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser
        115                 120                 125
Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly
    130                 135                 140
Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala
145                 150                 155                 160
Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro
                165                 170                 175
Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu
            180                 185                 190
Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu
        195                 200                 205
Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly
    210                 215                 220
Gln Val Tyr Phe Gly Ile Ile Ala Leu
225                 230
<210> SEQ ID NO: 4
<211> LENGTH: 205
<212> TYPE: PRT
<213> ORGANISM  Homo sapiens
<400> SEQUENCE: 4
Met Thr Pro Pro Glu Arg Leu Phe Leu Pro Arg Val Arg Gly Thr Thr
  1               5                  10                  15
Leu His Leu Leu Leu Leu Gly Leu Leu Leu Val Leu Leu Pro Gly Ala
             20                  25                  30
```

RAW SEQUENCE LISTING DATE: 04/13/2001
PATENT APPLICATION: US/09/507,968B TIME: 13:20:11

Input Set : A:\09507968 SEQ LIST.txt
Output Set: N:\CRF3\04122001\I507968B.raw

```
287 Gln Gly Leu Pro Gly Val Gly Leu Thr Pro Ser Ala Ala Gln Thr Ala
288          35                  40                  45
290 Arg Gln His Pro Lys Met His Leu Ala His Ser Thr Leu Lys Pro Ala
291      50                  55                  60
293 Ala His Leu Ile Gly Asp Pro Ser Lys Gln Asn Ser Leu Leu Trp Arg
294  65                  70                  75                  80
296 Ala Asn Thr Asp Arg Ala Phe Leu Gln Asp Gly Phe Ser Leu Ser Asn
297                  85                  90                  95
299 Asn Ser Leu Leu Val Pro Thr Ser Gly Ile Tyr Phe Val Tyr Ser Gln
300              100                 105                 110
302 Val Val Phe Ser Gly Lys Ala Tyr Ser Pro Lys Ala Thr Ser Ser Pro
303          115                 120                 125
305 Leu Tyr Leu Ala His Glu Val Gln Leu Phe Ser Ser Gln Tyr Pro Phe
306      130                 135                 140
308 His Val Pro Leu Leu Ser Ser Gln Lys Met Val Tyr Pro Gly Leu Gln
309  145                 150                 155                 160
311 Glu Pro Trp Leu His Ser Met Tyr His Gly Ala Ala Phe Gln Leu Thr
312                  165                 170                 175
314 Gln Gly Asp Gln Leu Ser Thr His Thr Asp Gly Ile Pro His Leu Val
315              180                 185                 190
317 Leu Ser Pro Ser Thr Val Phe Phe Gly Ala Phe Ala Leu
318          195                 200                 205
321 <210> SEQ ID NO: 5
322 <211> LENGTH: 244
323 <212> TYPE: PRT
324 <213> ORGANISM  Homo sapiens
326 <400> SEQUENCE  5
327 Met Gly Ala Leu Gly Leu Glu Gly Arg Gly Gly Arg Leu Gln Gly Arg
328   1               5                  10                  15
330 Gly Ser Leu Leu Leu Ala Val Ala Gly Ala Thr Ser Leu Val Thr Leu
331              20                  25                  30
333 Leu Leu Ala Val Pro Ile Thr Val Leu Ala Val Leu Ala Leu Val Pro
334          35                  40                  45
336 Gln Asp Gln Gly Gly Leu Val Thr Glu Thr Ala Asp Pro Gly Ala Gln
337      50                  55                  60
339 Ala Gln Gln Gly Leu Gly Phe Gln Lys Leu Pro Glu Glu Glu Pro Glu
340  65                  70                  75                  80
342 Thr Asp Leu Ser Pro Gly Leu Pro Ala Ala His Leu Ile Gly Ala Pro
343                  85                  90                  95
345 Leu Lys Gly Gln Gly Leu Gly Trp Glu Thr Thr Lys Glu Gln Ala Phe
346              100                 105                 110
348 Leu Thr Ser Gly Thr Gln Phe Ser Asp Ala Glu Gly Leu Ala Leu Pro
349          115                 120                 125
351 Gln Asp Gly Leu Tyr Tyr Leu Tyr Cys Leu Val Gly Tyr Arg Gly Arg
352      130                 135                 140
354 Ala Pro Pro Gly Gly Gly Asp Pro Gln Gly Arg Ser Val Thr Leu Arg
355 145                 150                 155                 160
357 Ser Ser Leu Tyr Arg Ala Gly Gly Ala Tyr Gly Pro Gly Thr Pro Glu
358                  165                 170                 175
```

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY DATE: 04/13/2001
PATENT APPLICATION: US/09/507,968B TIME: 13:20:12

Input Set : A:\09507968 SEQ LIST.txt
Output Set: N:\CRF3\04122001\I507968B.raw

L:496 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:497 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:499 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:500 M:341 W (46) "n" or "Xaa" used, for SEQ ID#:7
L:501 M:341 W (46) "n" or "Xaa" used, for SEQ ID#:7
L:684 M:341 W (46) "n" or "Xaa" used, for SEQ ID#:8
L:687 M:341 W (46) "n" or "Xaa" used, for SEQ ID#:8
L:689 M:341 W (46) "n" or "Xaa" used, for SEQ ID#:8
L:690 M:341 W (46) "n" or "Xaa" used, for SEQ ID# 8
L:691 M:341 W (46) "n" or "Xaa" used, for SEQ ID# 8
L:692 M 341 W (46) "n" or "Xaa" used, for SEQ ID# 8
L:783 M 341 W (46) "n" or "Xaa" used, for SEQ ID# 9
L:784 M 341 W (46) "n" or "Xaa" used, for SEQ ID# 9
L:785 M 341 W (46) "n" or "Xaa" used, for SEQ ID# 9
L:786 M 341 W (46) "n" or "Xaa" used, for SEQ ID# 9
L 787 M 341 W (46) "n" or "Xaa" used, for SEQ ID#:9
L 788 M 341 W (46) "n" or "Xaa" used, for SEQ ID#.9
L 789 M 341 W (46) "n" or "Xaa" used, for SEQ ID#:9
L:1382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35
L 1406 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36